Resource Folder Documents for the Washington State Wetland Mitigation Banking Instrument

Documents contained in the resource folder provide technical support for bank design, operation, maintenance, and protection. These reports are typically produced during the bank technical review period to help the sponsor and Interagency Review Team (IRT) negotiate how site plans, performance standards, credit releases, and other major components of the bank are developed. Reports contained in the resource folder serve as reference for the bank decision-making process. These documents will be submitted as draft hardcopies at various stages of the IRT review and should be compiled into a complete resource folder and submitted in final hardcopy and electronic form with the final mitigation banking instrument (MBI). Electronic submittals should be placed on a CD. The table below lists resource reports that are typically required during the technical review period. This list is not exhaustive and will vary depending on the unique site characteristics and proposed bank design. A summary of each resource report is provided below.

Typical resource reports contained within the resource folder

Delineation of waters of the United States, including wetlands, and U.S. Army Corps of Engineers jurisdictional determination
Wetland functional assessment
Biological evaluation/Biological assessment
Letters from the Washington State Office of Archaeology and Historic Preservation and concerned Tribes or other parties
Hydrology analysis report
Basis of design report
Construction stormwater pollution prevention plan required as part of the construction general permit
Long-term management and maintenance plan[1]
Final-draft conservation easement (will be replaced with a signed conservation easement when completed)
Any other documentation deemed necessary by the IRT

Delineation of Waters of the United States, Including Wetlands, and U.S. Army Corps of Engineers Jurisdictional Determination

In Washington State, wetland delineations must be conducted in accordance with: the 1987 *Corps of Engineers Wetlands Delineation Manual*; the appropriate supplement for the project site, either the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (May 2010) or *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0* (September 2008); and the *Washington State Wetland Identification and Delineation Manual*[2].

[1] The LTMMP may be added to the Resource Folder after the MBI is signed.

[2] The Corps has released final versions of the Washington State Regional Supplements (Western Mountains, Valleys, and Coast Region and the Arid West Region). In Washington State, the state wetland manual will be

All state agencies require that applicants follow the state manual for any project that is subject to state laws and regulations on wetlands. Any city or county implementing local regulations under the Growth Management Act also requires use of the state manual.

Wetland delineation establishes the existence and physical limits of a wetland for the purposes of federal, state, and local regulations. Wetland delineation is an element of a jurisdictional determination. A jurisdictional determination identifies which water bodies within a project's boundaries meet the definition of "waters of the United States." The U.S. Army Corps of Engineers (Corps), not applicants or their consultants, determines whether or not a wetland is a "waters of the United States" and thus regulated under the federal Clean Water Act (CWA). If the Corps determines that a wetland is not subject to the CWA, the wetland may still be a "water of the State" and subject to regulation by the Washington State Department of Ecology (Ecology) and local jurisdictions. Ecology and the local jurisdictions, not the applicant or their consultants, determine whether or not a wetland is a "water of the State."

The Seattle District Corps' Regulatory webpage and Ecology's Wetlands webpage provide information, documents, and guidance on waters and wetlands.

Wetland Functional Assessment Methods

Wetland assessments provide procedures for identifying, characterizing, or measuring wetland functions and/or services. They are used in a variety of contexts for regulatory, planning, management, and educational purposes. Two assessment methods are typically used in Washington State: the Washington State Rating System for western or eastern Washington and the Washington State Wetland Function Assessment Method (WAFAM). These assessment methods can be used to estimate functions and services impacted by a project or increased at a bank, but they do not determine the number of credits required to mitigate for such impacts. Both methods require individuals to have a technical background in wetland science and to have been trained in the appropriate method. Sponsors may use alternative assessment methods with IRT approval.

Washington State Wetland Rating System

The wetland rating systems categorize wetlands into four categories based on their sensitivity to disturbance, their rarity, our ability to replace them, and the functions they provide. The rating system, however, does not replace a full assessment of wetland functions that may be necessary to plan and monitor a compensatory mitigation project.

The "rating" categories are intended to be used as the basis for developing standards for protecting and managing the wetlands to reduce further loss of their value as a resource. The rating systems are primarily intended for use with vegetated, freshwater wetlands. The systems can also categorize estuarine wetlands, but not characterize their functions.

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phased out and replaced by the Supplements. The WAC will reference the Supplements as the state wetland manual. Any local code referencing the state manual will thereby require use of the Corps Supplements.

WAFAM

The WAFAM is a functional assessment model used to evaluate individual vegetated riverine and depressional wetlands in the lowlands of western Washington to meet regulatory and non-regulatory needs. Models have also been developed for three subclasses of depressional wetlands in the Columbia Basin.

The assessments provide a score for the degree to which several functions (up to 15) are performed by a wetland. The WAFAM measures wetland potential performance or habitat suitability, and provides a qualitative rating of opportunity for a site relative to wetlands from the same regional wetland subclass. These assessment models can be used as a guide to design, allowing users to refer to model variables to determine which conditions increase or decrease wetland potential performance or habitat suitability.

Ecology maintains web pages that provide information, documents, and tools regarding the Washington State Wetland Rating System[3] and WAFAM.[4]

Biological Evaluation/Biological Assessment

The Regulatory Branch of the Corps evaluates applications for permits for work in waters of the United States. The Corps permit decision is considered a federal action that must comply with the Endangered Species Act (ESA). The ESA is administered by the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). The NMFS has ESA jurisdiction over salmon, other marine fish, marine mammals, and marine reptiles. The USFWS has ESA jurisdiction over birds, terrestrial animals, plants, amphibians, and most freshwater fish. Under Section 7 of the ESA, the Seattle District Corps must consult with the NMFS and the USFWS on any permit application for proposed work which may affect threatened or endangered species, or their designated critical habitat. With listings of many fish species as threatened or endangered, the majority of permit applications in the state of Washington will likely involve some elements that require Section 7 evaluation. In addition to fish, other threatened and endangered plants and animals occur in various areas of the state.

The Corps, through informal and formal consultation procedures with NMFS and USFWS, must evaluate information on the presence of listed species (including timing and life stages), habitat for such species and their prey sources, and other parameters. The information required for ESA evaluation must be prepared in the form of a Biological Evaluation (BE) or Biological Assessment (BA) which is utilized to assess project impacts to listed, and/or proposed species and designated and/or proposed critical habitat. The Corps will use the BE or BA to determine whether the project may affect listed species or their critical habitat. If the Corps determines that work proposed in the permit application would have no effect on all threatened or endangered species, no further consultation with NMFS and USFWS is required. The Corps has developed guidelines for "No Effect" situations, for both freshwater and marine environments.

[3] http://www.ecy.wa.gov/programs/sea/wetlands/ratingsystems/index.html
[4] http://www.ecy.wa.gov/programs/sea/wetlands/wfap/index.html

If the Corps determines that the work proposed in a permit application may affect any threatened or endangered species, some kind of consultation with NMFS and USFWS is required. The two types of consultation are informal or formal. Biological evaluations are submitted for informal consultation; BAs are submitted for formal consultation.

As part of a BE or BA, potential impacts to Essential Fish Habitat (EFH) must be addressed. The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996, established procedures designed to identify, conserve, and enhance EFH for those species regulated under a federal Fisheries Management Plan (FMP). In Washington, there are three FMPs covering groundfish, coastal pelagic species, and Pacific salmon. The MSA requires Federal agencies to consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH. Essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

The Seattle District Corps' Regulatory Program maintains an informational ESA/EFH webpage with general information, tools, BE and BA templates, and consultation requirements. In addition, NMFS' Northwest Regional Office and USFWS' Washington Fish and Wildlife Office web pages contain additional ESA and/or EFH information.

Letters from the Washington State Office of Archaeology and Historic Preservation and Concerned Tribes and other Parties

In Washington State, archaeological sites and Native American graves are protected from known disturbance by a variety of federal and state laws. In accordance with Section 106 of the National Historic Preservation Act (NHPA), any Federal agency "having authority to license any undertaking shall, … prior to the issuance of any license… take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." Under Section 106, the Corps has the responsibility to determine whether the permitted undertaking could affect historic properties. Historic properties are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register.

Current Washington State law requires a permit from the Washington State Department of Archaeology and Historic Preservation (DAHP) to remove or excavate any Native American human remains or archaeological sites. A permit is also required to remove or excavate historic archaeological resources that are eligible for or listed in the National Register of Historic Places.

If the proposed work may affect one or more historic properties subject to protection under the NHPA, a professional cultural resource assessment may be required before a project commences to identify historic properties located in the permit area. This may include an onsite field survey and evaluative testing. Any survey work should be designed to provide enough information to determine the national register eligibility of any discovered historic properties and to assess the potential effects of the permitted action to those properties.

Depending upon the results of this survey, it is possible that some additional work or evaluative testing may be required. If it is determined that the permitted action has the potential to adversely affect historic properties, additional consultation will be required to avoid, minimize, or mitigate the adverse effects.

All historic properties, including both archaeological resources and standing structures (whether deteriorated or not) in the project area that are over fifty years old, must be recorded on either a DAHP Archaeology Site Inventory Form or a Historic Property Inventory Database form. The DAHP reporting forms and guidance are available on the DAHP website.[5] The survey and recording forms must be completed by a qualified archaeologist, architectural historian, or the appropriate historic preservation specialist. A list of qualified individuals and firms is also available from the DAHP.[6]

The DAHP webpage provides information, documents, maps, photographs, and tools regarding archaeological and historic sites, in addition to local government programs, regulations, and other useful data.

Hydrology Analysis Report

A hydrology analysis report is intended to serve as a complete, documented record containing the engineering justification for all drainage modifications that occur as a result of a project. These reports are often required as part of the application process for local grading permits. The primary use of a hydrology analysis report is to facilitate review of the design and to assist in the preparation of the plans. The report may also be part of a larger basis of design report (see below). The report should be clearly written and show conditions before and after construction. The content of a hydrology analysis report includes an evaluation of existing conditions (both surface water and groundwater), hydrologic modeling of the proposed design, details of any hydrologic structures (ditches, weirs, etc.), and all supporting data. The complexity of the analysis depends on whether special circumstances exist, such as the presence of a Federal Emergency Management Agency (FEMA) floodway at the site. The report should be prepared by a qualified hydrologist or licensed hydrogeologist or engineer.

Basis of Design Report

Bank projects are often large and technically complex facilitating the need for a Basis of Design (BOD) report that describes the planned technical approach for the project as well as the design parameters to be used. This report should be submitted as part of the bank technical review process. The BOD report presents facts to demonstrate the project concept is fully understood and that subsequent design details and their ultimate presentation in the final drawings and specifications will be based on sound science and engineering decisions. The IRT does not

[5] http://www.dahp.wa.gov/documents/ExternalFINAL.pdf
[6] http://www.dahp.wa.gov/pages/AboutUs/Contact.htm

comment on a site plan unless they understand the background of a particular design and how and why the sponsor believes the design will be successful.

Some of the topics that the BOD report should document are:

- how the design facilitates the performance and operational requirements of the project,
- a description of the set of conditions, needs, and requirements taken into account in designing the project, and
- any primary assumptions and the key concepts used in the design.

Any available data on existing topography, groundwater levels, surface flows in existing streams and ditches, vegetation, soils, wetland locations, and other characteristics should be included in the report. The report should include specific design goals and objectives, targeted functions, major construction tasks, information on phasing of the design, proposed HGM and habitat types, expected water sources and hydroperiods, evidence of sufficient water to support the proposed aquatic resources, and other relevant elements. The report should be prepared by qualified wetland and stream professionals and others as needed, such as hydrologists, hydrogeologists, landscape architects, and/or engineers. The qualifications of these professionals should be included.

A reference to consult is the *Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans* authored by Ecology, the Corps, and the Environmental Protection Agency (March 2006).

Construction Stormwater Pollution Prevention Plan (SWPPP)

Many bank projects will require a Construction Stormwater General Permit from Ecology. One permit requirement is that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the project and that the plan be kept on-site.

Stormwater management detailed in a SWPPP involves: careful application of site design principles; construction techniques to prevent erosion and the discharge of sediments and other pollutants; source controls to keep pollutants out of stormwater; flow control facilities to reduce discharge flow rates; and treatment facilities to reduce pollutants.

Ecology's Water Quality Program administers the Construction Stormwater General Permit and maintains an informational webpage[7] with descriptions of permit requirements, including SWPPP templates.

[7] http://www.ecy.wa.gov/programs/wq/stormwater/construction/

Long-term Management and Maintenance Plan (LTMM Plan)

The sponsor is responsible for ensuring that a LTMM Plan is developed and implemented to protect and maintain in perpetuity the aquatic functions and services of the bank site. Once the establishment period of the bank has terminated, the sponsor will assume responsibility for implementing the plan, unless the sponsor assigns this responsibility to a long-term steward.

The LTMM Plan should consist of enumerated objectives that are documented in status reports to the IRT. The LTMM Plan should also include those elements necessary to provide long-term protection for the aquatic ecosystem and habitat resources of the bank site. The specific elements of the plan must be tailored to meet the specific protection needs of the bank site.

In addition, the sponsor will establish a financial account in an accredited and federally insured financial institution. The Long-Term Management and Maintenance Endowment Fund (Endowment Fund) is a non-wasting account that must be incrementally funded until it is fully endowed. Once the (Endowment Fund) is fully funded, the sponsor will be released from any further obligation to deposit a designated sum corresponding to each sale, use, or transfer of credits. At the termination of the bank establishment period, the "full funding" amount will be disbursed from the (Endowment Fund) account to the sponsor or long-term steward.

The Seattle District Corps' Regulatory Program maintains an informational mitigation banking webpage[8] that includes an approved LTMM Plan template.

Conservation Easement

During the bank technical review period, the sponsor must submit a conservation easement for IRT review. The appropriate conservation easement must dedicate in perpetuity the property constituting the bank that is to be created, restored, enhanced, or preserved for credit. Conservation easements are the required preservation mechanism and should include a legal description prepared by a registered surveyor incorporating the conservation easement area. The conservation easement must be approved by the IRT and recorded with the county auditor. Removal or modification of the conservation easement will require written approval by the IRT. Conveyance of any interest in the property will be subject to the conservation easement.

Use prohibitions reflected in the conservation easement should preclude the site from being used for activities that would be incompatible with the establishment and operation of the bank. All restrictions should be granted in perpetuity without encumbrances or other reservations, except those encumbrances or reservations approved by the IRT and those that do not adversely affect the ecological viability of the bank. Any portion of the bank not encumbered by the conservation easement will not be credited for use in the bank.

Additionally, the sponsor must deliver a title acceptable to the IRT covering the bank property. The credit-generating property will be free and clear of any encumbrances that would conflict

[8] Webpage is currently under construction.

with its use as a bank, including, but not limited to, any liens that have priority over the recorded preservation mechanism.

Any other Documentation Deemed Necessary by the IRT

Depending on the unique site characteristics and proposed bank design, the following resource reports may be required by the IRT:

- Botanical survey report,
- Geomorphic assessment report,
- Soil characterization and geotechnical report, or
- Phase 1 Environmental Site Assessment report if there is potential of historic site contamination.

Additional reports may be required, as determined by the IRT.

In addition to the technical reports submitted to the IRT, permits associated with bank construction and establishment should be included in the resource folder. These permits may include the following:

- Section 404 Permit and/or Section 10 Permit from the Corps;
- Section 401 Water Quality Certification and/or Section 402 Construction Stormwater General Permit from Ecology;
- Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife;
- Aquatic Resources Use Authorization from the Washington Department of Natural Resources; and
- Shoreline Permit, Floodplain Development Permit, and/or Clearing and Grading Permit from local government.

Additional permits may be required, depending on the unique site characteristics of the bank.